

Health Policy Assessment Issue Brief

Vaccine Acceptance and Uptake: Cross-sectional Survey of Black and Latinx Communities Experiencing Poverty in New Jersey

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Introduction

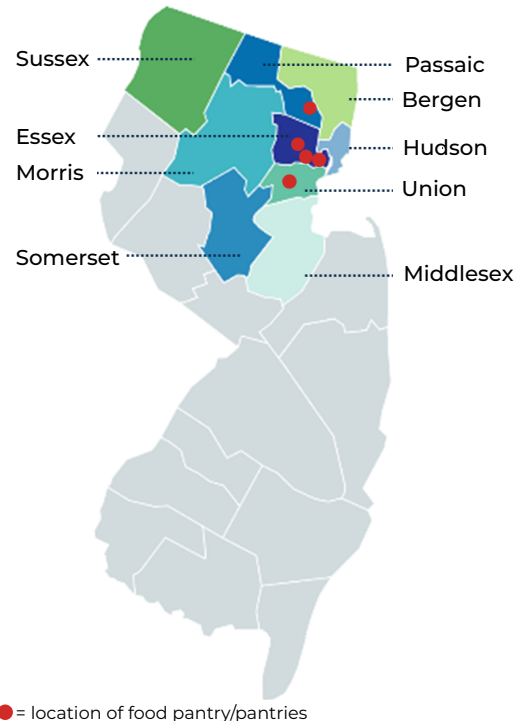
Vaccine rollout in the United States in January 2021 marked hope for relief to the impact of the COVID-19 virus on our well-being. Recovery hinges on vaccination uptake among all populations. However, initial data from six surveys conducted in summer 2020 seemed to indicate the potential for lower uptake among Black and Latinx communities across the United States (Malik et al., 2020; Callaghan et al., 2020; Kreps et al., 2020; Fisher et al., 2020; Perlis et al., 2020; Lenon et al., 2020). Concerns about the inequitable uptake among those most impacted by COVID-19 left many local organizations wondering what actions they could take to encourage vaccination.

Unfortunately, these initial surveys had several limitations, including sample sizes that did not allow for precision to understand variation at local levels, lack of strong representation among people of color, and limited inquiry into reasons underlying people's vaccine behavior. Informing local response requires information at a more granular level.

With this need for local evidence and the desire to truly understand and respond to community needs, the Summit Medical Group Foundation (SMGF) funded a survey from January 26 to April 2, 2021, to understand COVID-19 vaccine attitudes and uptake among Black and Latinx communities who are experiencing poverty and are disproportionately impacted by the virus. Volunteers surveyed 603 residents using and living near nine SMGF partner food pantries and responding to flyers in two New Jersey cities: Paterson and Jersey City.¹

Summit Medical Group service areas and partnering food pantry locations

As an anchor institution with 80+ multi-specialty locations serving nine counties in New Jersey and nine partnering food pantries, the Summit Medical Group (SMG) and its foundation serve as a trusted voice on COVID-19 response and recovery.



Food pantries include the following: Solid Rock and Deeper Life in Irvington; Eben-Ezer in Newark; Interfaith, City of Orange, and Seventh-Day Adventist in Orange; Father English in Paterson; Greater Refuge in Plainfield; and Grace Refrigerator in Summit.

Two-thirds of these residents were Black, almost one-fifth were Latinx, more than half had annual household incomes below \$60,000, and almost all reported being in excellent, very good, or good health. To learn more about cultural and other differences that could affect attitudes and uptake, the survey was also conducted on a purposefully sampled population of 465 predominantly non-Hispanic White² patients that visited a Summit Medical Group (SMG, now branded Summit Health) location.³ (Supplemental Exhibit S.1 presents further comparison between community members using and living near food pantries and SMG patients. Methods are detailed at the end of the brief.)

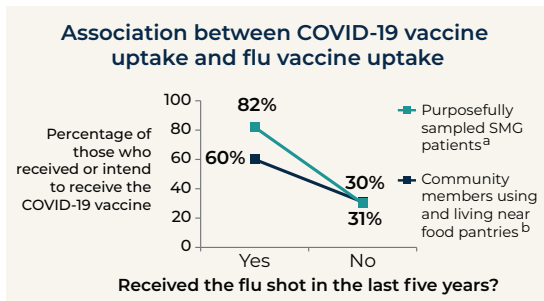
Vaccination uptake and intent

Overall, survey respondents using and living near food pantries were predominantly Black and Latinx and had significantly lower uptake of and intent to get the COVID-19 vaccine than purposefully sampled SMG patients, who were predominantly White. Survey responses show that the low uptake and intent had less to do with confidence in the vaccine’s effectiveness, but rather more to do with concerns around safety, mistrust of motivations behind authorities’ endorsement, and barriers to access.

Fewer community members using and living near food pantries had gotten fully vaccinated or planned to get vaccinated compared to sampled SMG patients. Overall, sampled SMG patients were significantly more likely to have received full or partial vaccination than community members using and living near food pantries (36 versus 22 percent) (Exhibit 1). In both populations, around 11 percent had received partial vaccination (one of two doses). Among those not vaccinated, 20 percent of respondents using and living near food pantries said that they definitely did not plan to get vaccinated, compared to 2 percent of sampled SMG patients ($p < 0.01$, data not shown). In contrast, 36 percent of community members using or living near food pantries said that they definitely would get the vaccination and another 43 said they either would probably or probably not get the vaccination. Also, a significantly higher proportion of unvaccinated sampled SMG patients said that they would definitely

Is having received a flu shot in the past a predictor of COVID-19 vaccine acceptance?

Yes. Among predominantly Black and Latinx respondents using and living near food pantries in New Jersey and purposefully sampled White patients at Summit Medical Group, having gotten a flu vaccination in the past five years was correlated with getting or intent to get a COVID-19 vaccine.



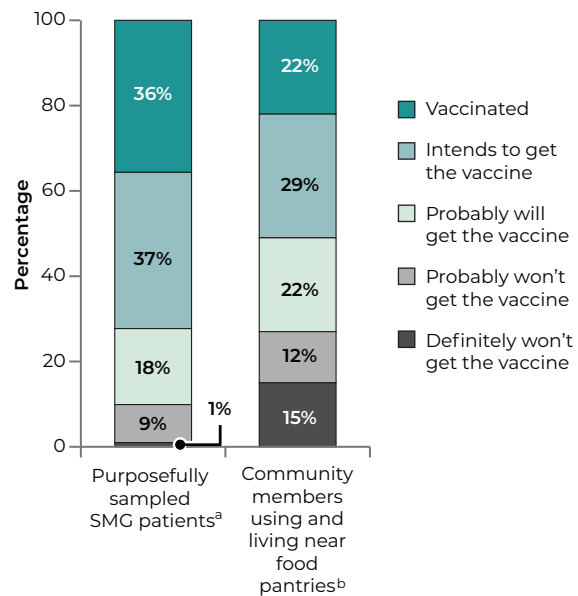
Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from Chi-square test.

^a N = 461

^b N = 599

Exhibit 1. Vaccine uptake and intent among communities using and living near food pantries in New Jersey and purposefully sampled Summit Medical Group patients



Source: Mathematica analysis of survey data fielded January 26 to April 2, 2021.

^a N = 461

^b N = 599

SMG = Summit Medical Group.

get the vaccine (57 percent), with a similar proportion of respondents using and living near food pantries saying that they would probably or probably not get the vaccine (42 percent).

The majority of respondents had high confidence in the effectiveness of and protection offered through vaccination.

Across community members using and living near food pantries and sampled SMG patients, the majority of those already vaccinated strongly agreed with the statement that the COVID-19 vaccine is effective and safer than the getting the virus (Exhibit 2). Over two-thirds believed that those who had already gotten COVID-19 still needed vaccination. Not surprisingly, only one-third of unvaccinated community members using and living near food pantries and SMG patients strongly felt the COVID-19 vaccine is effective, though the majority still felt it was safer than getting the virus and that people who got COVID-19 still needed vaccination.

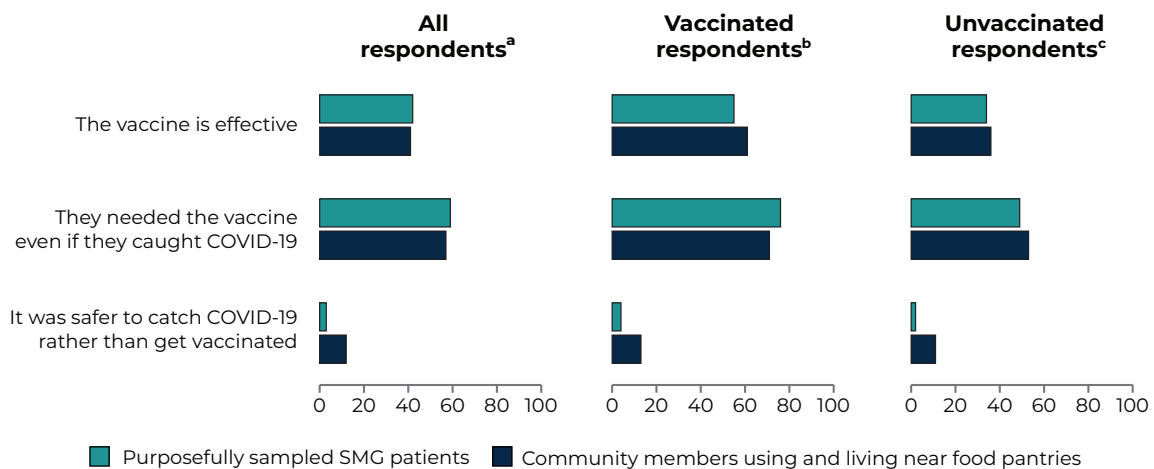
Community members using and living near food pantries had more concerns about the safety of the COVID-19 vaccine than

sampled SMG patients. Regardless of vaccination status, community members using and living near food pantries had more concerns than sampled SMG patients about how quickly the vaccine was developed, that vaccine clinical trials did not include people like them, unknown future side effects of the vaccine, and interactions of the vaccine with other health conditions (Exhibit 3, next page). These concerns were significantly higher among unvaccinated community members using and living near food pantries than sampled SMG patients.

Community members using and living near food pantries had more mistrust of institutions' motivation behind vaccine promotion than sampled SMG patients.

One-fifth to one-quarter of community members using and living near food pantries, regardless of COVID-19 vaccination status, strongly agreed with the statement that authorities promoted the vaccine for financial gain (Exhibit 4, next page). Among community members using and living near food pantries, 28 percent of those who were vaccinated and 47 percent of those who were

Exhibit 2. Majority of people believe in the effectiveness of the COVID-19



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test within each sample group.

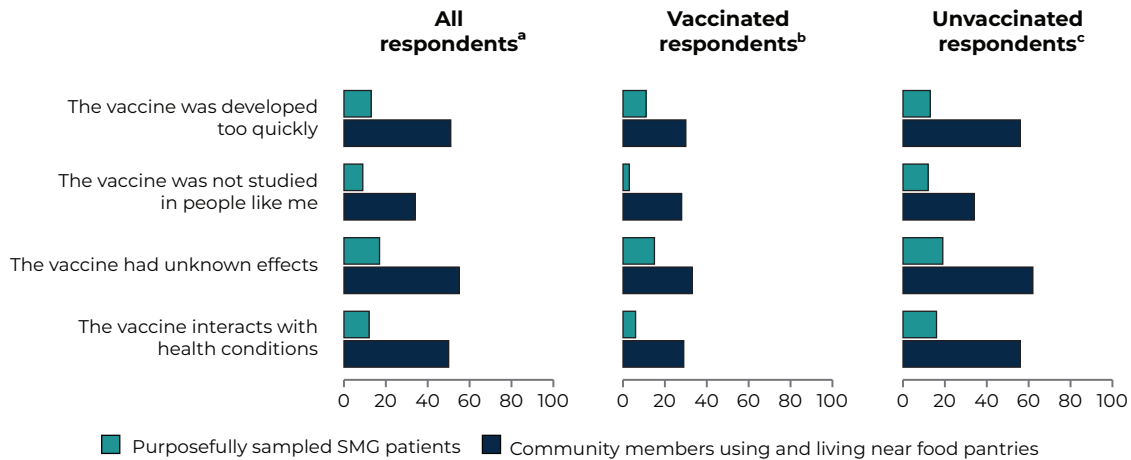
^a SMG patients: N = 461; Community members using and living near food pantries: N = 599.

^b SMG patients: N = 262; Community members using and living near food pantries: N = 143.

^c SMG patients: N = 197; Community members using and living near food pantries: N = 452.

SMG = Summit Medical Group.

Exhibit 3. Beliefs about COVID-19 vaccine safety among all, vaccinated, and unvaccinated respondents



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test within each sample group.

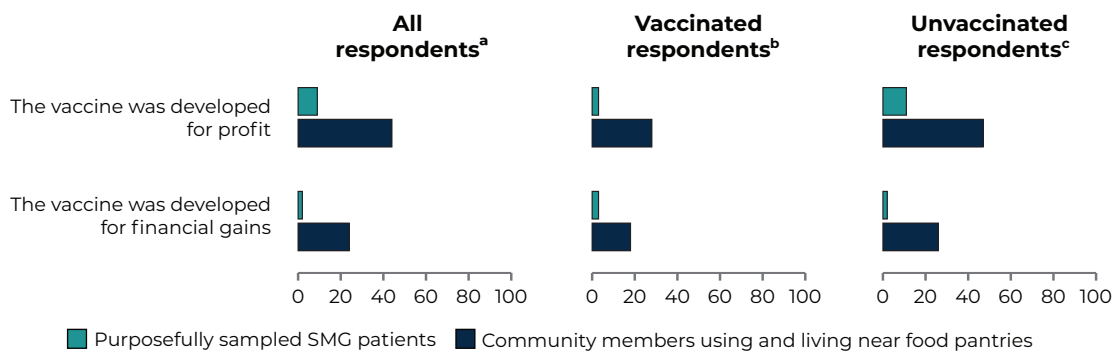
^a SMG patients: N = 461; Community members using and living near food pantries: N = 599.

^b SMG patients: N = 262; Community members using and living near food pantries: N = 143.

^c SMG patients: N = 197; Community members using and living near food pantries: N = 452.

SMG = Summit Medical Group.

Exhibit 4. Trust in institutions' motivation behind vaccine promotion among all, vaccinated, and unvaccinated respondents



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test within each sample group.

^a SMG patients: N = 461; Community members using and living near food pantries: N = 599.

^b SMG patients: N = 262; Community members using and living near food pantries: N = 143.

^c SMG patients: N = 197; Community members using and living near food pantries: N = 452.

SMG = Summit Medical Group.

unvaccinated strongly agreed that drug companies are more concerned with profit than public good. In comparison, only 2–3 percent of vaccinated and unvaccinated SMG patients strongly agreed with the statement that authorities promoted the vaccine for financial gain and 11 percent of those unvaccinated strongly agreed with the statement that drug companies were more concerned about profit.

Community members using and living near food pantries had more concerns about accessibility to the COVID-19 vaccine than sampled SMG patients. Among unvaccinated community members using and living near food pantries, 26 percent strongly agreed that they did not know how or where to get the vaccine and 19 percent were concerned about paying for it (Exhibit 5). In comparison, among unvaccinated SMG patients, only 7 percent strongly agreed with the statement about not knowing how or where to get the vaccine and 3 percent strongly agreed with the statement about concern with paying for the vaccine. Such differences between sampled SMG patients and community members using and living near food pantries are substantially diminished for those who already got vaccinated.

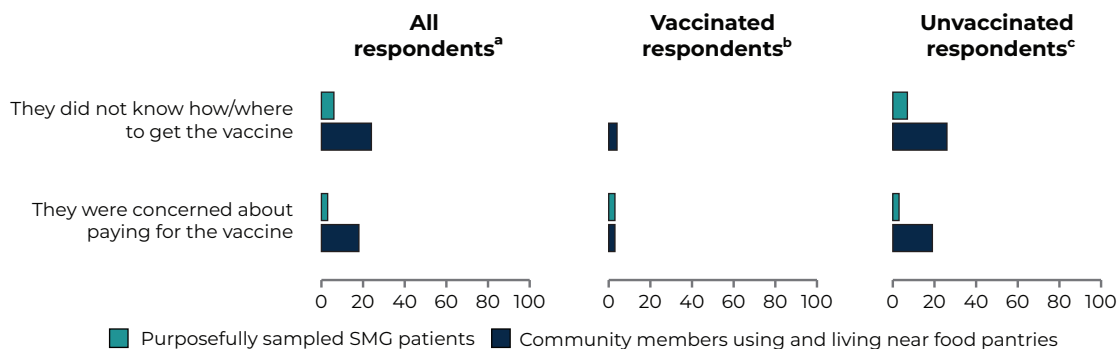
Where to focus efforts to increase acceptance and uptake

Vaccinated survey respondents and those who said they “definitely” intend or do not intend to get vaccinated have decisively made up their mind. It is respondents saying that they “probably” would or would not get the vaccine that might be influenced through messaging and infrastructure supports to assist with accessing the vaccine.

Discussed further below, focusing on this subset of respondents shows that effective messaging would address potential side effects and be delivered by trusted health care providers or representatives of the Centers for Disease Control and Prevention (CDC).

Community members using and living near food pantries and sampled SMG patients unsure about vaccination had concerns around side effects of vaccination. Those unsure about getting vaccinated were concerned about the unknown long-term effects of the vaccine, that the vaccine was developed too quickly, and that the vaccine could interact with other health conditions (Exhibit 6, next page). Although the pattern of concerns was generally similar across both com-

Exhibit 5. Perceived accessibility to COVID-19 vaccination among all, vaccinated, and unvaccinated respondents



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test within each sample group.

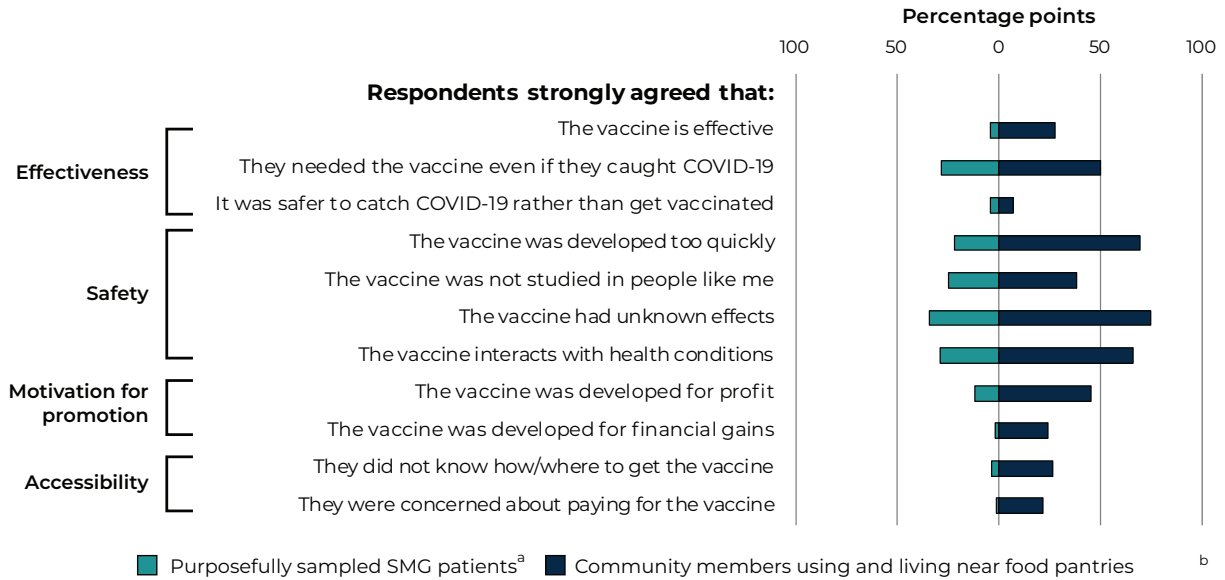
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^b SMG patients: N = 262; Community members using and living near food pantries: N = 143.

^c SMG patients: N = 197; Community members using and living near food pantries: N = 452.

SMG = Summit Medical Group.

Exhibit 6. Beliefs about the COVID-19 vaccine among unvaccinated individuals unsure whether they will get vaccinated



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test.

^a N = 51

^b N = 179

SMG = Summit Medical Group.

munity members using and living near food pantries and sampled SMG patients, they were significantly higher among community members using and living near food pantries. For example, 75 percent of community members using and living near food pantries compared to 34 percent of sampled SMG patients had concerns about future effects of the vaccine. These results indicate that messages addressing such highlighted concerns could have greater impact in Black and Latinx communities and further vaccination equity.

Health care providers serve as a trusted messenger about COVID-19 vaccination with the CDC and family and friends as other influential and trusted voices. Consistent with other health interventions, health care providers are the most highly trusted source of information across all populations (Exhibit 7). Community members using and living near food pantries also highly value information from the CDC and from family and friends. Authority figures, such as state and local government officials and religious leaders, had less credibility, and the news media had the

Exhibit 7. Sources that unvaccinated individuals trust to inform them about the COVID-19 vaccine

	Purposefully sampled SMG patients ^a	Community members using and living near food pantries ^b
Health care provider	54%	48%
CDC	11%	30%
Friends and family	28%	28%
State/local government officials	2%	17%
Religious leaders	3%	13%
Federal government officials	1%	12%
News media	<1%	9%

Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: $p < 0.05$ from t-test.

^a N = 51

^b N = 179

SMG = Summit Medical Group.

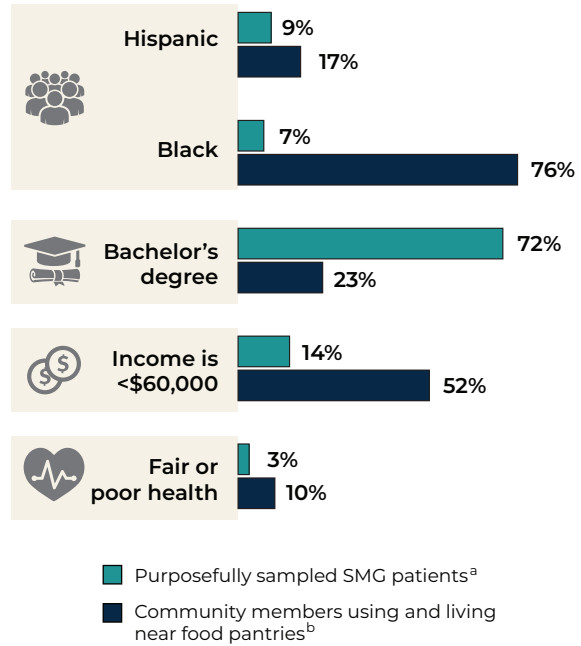
least. In addition, health care providers and the CDC induced significantly higher trust among community members using and living near food pantries than SMG patients. Outreach from providers and media ads from the CDC carrying messages to ease concerns could boost uptake of the COVID-19 vaccine in the near term.

Conclusion

As we enter May 2021, approximately one-third of the United States and New Jersey population is fully vaccinated (Centers for Disease Control and Prevention, 2021). More than half of vaccinations have been given to White New Jersey residents, with another 6 percent given to Black residents and 10 percent given to Latinx residents (Kaiser Family Foundation, 2021). Comparing this uptake by race to the overall state population composition indicates slight inequities in vaccination uptake. Specifically, Black populations compose 12 percent of the New Jersey population, but only half of that proportion have received vaccination. Similarly of the 21 percent of Latinx population, only half of this proportion are represented among those vaccinated. The presented survey data show that concerns about the vaccine’s side effects among Black and Latinx people and barriers to access in their communities could be driving some of these inequities. Furthermore, as more people become vaccinated in the community, the concerns about side effects are likely to diminish, making barriers to accessing vaccination the big roadblock to vaccination equity. Delivery of messages to counteract concerns about side effects from trusted sources can only speed up uptake at the pace that barriers to access are eliminated for Black and Latinx communities. Thus, getting back to normalcy depends on not just alleviating concerns of side effects but also on equity in the infrastructure to deliver vaccines to *all* communities. In addition, longer-term needs for booster shots and response to other public health crises will require that these infrastructure changes last beyond the immediate crisis and become sustained.

Supplemental exhibit

Exhibit S.1. Age-adjusted survey respondent characteristics



Source: Mathematica analysis of survey data January 26 to April 2, 2021.

Note: The respondent sample included 465 Summit Medical Group patients and 603 residents using food pantries.

^a N = 51

^b N = 179

SMG = Summit Medical Group.

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Endnotes

¹ SMGF partnered with 11 food pantries, but one in Plainfield (New Covenant) and one in Paterson (Paul) did not have any participants responding to the survey.

² Fifty-eight percent had household incomes over \$100,000.

³ All calculations were age- and gender-adjusted. See methods box at the end of the brief for more information about our methods.

Survey methods

The Summit Medical Group Foundation (SMGF) partnered with Mathematica to design and field a 5-minute survey to ask New Jersey community members about their receipt of/intention to get vaccinated for COVID-19 and reasons underlying their decision. Trained volunteers administered the survey on tablets at nine food pantries and one Summit Medical Group (SMG) location. An electronic flyer that provided a link to the survey, with a unique username and password to access it, was also sent to Paterson residents and community members at the York Street pantry. Of the 1,068 responses, 531 were from community members using and living near food pantries, 465 were from patients at SMG, and 72 were from residents who received the electronic flyers.

Volunteers intercepted community members at food pantry and near-by grocery store entrances to ask for their participation in the survey. SMG patients were intercepted at the practice's Berkeley Heights site. Respondents provided informed consent and answered the survey away from other people to protect their confidentiality. Upon completing the survey, community members received a \$5 gift card to a grocery store; SMG patients did not receive any incentive.

For the analysis, respondents using and living near food pantries and SMG patients were treated as two independent samples. Because receipt of COVID-19 vaccination is associated with age, we adjusted the joint distribution of age and gender for each sample separately to match those of the general population of New Jersey. We obtained the population benchmarks from 2019 American Community Survey 5-year estimates for New Jersey and performed post-stratification weighting and all subgroup analysis using the survey package in R. All figures in this brief were based on weighted estimates.

This brief was made possible by the generosity and partnership of the Summit Medical Group Foundation (SMGF). It was prepared by So O'Neil, Kester Kitts, Hanzhi Zhou, and Andy Weiss at Mathematica. Andy Weiss provided overall leadership for the survey design. Kester Kitts coordinated survey logistics and fielding with SMGF and their volunteers. Hanzhi Zhou conducted statistical survey weighing. So O'Neil directed the project and had primary authorship of this brief. We are grateful to Naveen Rao at The Rockefeller Foundation for connecting us with Hari Nadiminti, MD and Joe Finocchiaro, BS at SMGF, whose commitment to fostering trust in health systems among communities of color drove this project. We would like to also thank Pamela Singer, BA for extraordinary coordination and Julianne Cherry, MPA for getting out there with volunteers—rain or shine—to administer the survey. Susan Gonzales provided much needed copyediting and Sheena Flowers bestowed her talent translating data into easy-to-digest graphics. Of course, the survey would not have been possible without the welcoming food pantries, the survey respondents, the many volunteers, and SMG staff, who graciously gave their time to make sure community members had a voice and are understood. For more information about the study, please contact Hari Nadiminti, MD at HNadiminti@summithealth.com. For more information about the survey, please contact So O'Neil at soneil@mathematica-mpr.com.